

Animal SIG Newsletter

My tenure as president of the Animal PT SIG will end at CSM 2025, and I would like to take this opportunity to thank all our members for their support throughout those years. I became a certified canine rehabilitation therapist in 2015, and honestly, I had no idea what the trajectory of my life would take me. All I wanted was to help dogs recover from injury and surgery and help improve their quality of life as they age, but along that journey, I ended up becoming a business owner so I could serve my patients and clients at the level that they deserved. Along that journey of business ownership, I became more active on social media, and that gradually led to PTs reaching out for help on how to transition to this field and me making connections and meeting other professionals working in our field. That is how I became increasingly involved with the APTSIG and the “behind the scenes” politics in animal physical therapy, and late 2019, I was invited to run for the role of Vice President.

At CSM 2020, I started my role as vice president, which only lasted a couple of months. I stepped into the role of president after our former president had to step down for personal reasons. It was May 2020, and as you can all remember, a lot was happening with COVID. My first task was to find a new Vice President working alongside me on projects and ideas, and I could not have been happier that Jenny Moe stepped up to the plate. We navigated the challenges and adversities of running the SIG as best as possible. Although we didn't accomplish everything we had set to achieve, I am incredibly proud of our work together.

The APTSIG has been around since 1998, and over the decades, many leaders in our field have stepped up and volunteered their time and energy to help drive us forward. I thank you all for leading the way. One of the challenges I faced was to bring new animal PT leaders into the fold, and out of everything we accomplished over the last few years, I can say with confidence that I am most proud of having been able to bring a new set of leaders who will continue to drive the APTSIG forward. I have witnessed first-hand the exponential growth of animal PT over the last decade and seeing a new generation of animal PTs enter our field and take leadership roles was a huge part of the legacy I had wished to leave behind.

With that said, there are still many changes and challenges ahead of us, and I would encourage everyone to continue doing what they can to move our field forward. Small actions add up, so please don't think getting involved only entails working with the APTSIG. We need stronger representation almost everywhere in the United States, especially at a local and state level, and that is where I challenge you to start things. Meaningful changes in animal PT don't happen overnight, and most start at a local level. The APTSIG is here to help drive those changes. Believe me when I say that a lot is constantly happening behind the scenes, especially when it comes to legislation changes and politics, but ultimately, none of that matters if PTs don't get more involved in our field as they become animal PTs. The APTSIG is here to help you... I am here to help you...and although I will continue

to help in whichever way I can, I am super excited about our new leadership and their plans for the APTSIG moving forward.

I hope to see you at CSM 2025. Please let me know if you will be there so we can meet. My time as APTSIG President is coming to an end, but my journey helping drive the animal PT field forward has only started. It has been amazing to see how our field has grown over a relatively short period of time over the last 10 years, with more and more PTs getting certified every year. The future of our field and profession is extremely bright, and I would encourage and invite you to come along this journey with us as it is only the beginning.

*Thank you,
Francisco Maia, PT, DPT, CCRT
Animal PT SIG President
fmaia@orthopt.org*

CLINICAL DECISION-MAKING IN ANIMAL WHEELCHAIRS

Dr. Jenny Moe, PT, MS, DPT, CCRT, APT

Wheeled assistive devices, also referred to as wheelchairs or carts, are available in a variety of designs and levels of support for our animal patients. Multiple companies, options, and other factors, such as cost, can be overwhelming when deciding if and when wheels may be appropriate for a patient. Many misconceptions about wheels prohibit or delay many rehab professionals from recommending carts. In this article, we will discuss the different styles of carts available, address misconceptions, and review important factors to consider when choosing wheels for our patients and clients.

LEVEL OF SUPPORT

Devices like rear wheel, front wheel, and full support or quad carts are available. Not all styles are available from each company, and design comes into consideration. A simple test to determine if a patient can handle a rear wheel cart is the towel/sling test. A rear-wheel cart is likely sufficient if the patient can advance the forelimbs easily with the rear supported at the waist with a towel/sling. A full support cart may be more appropriate if they move backward, attempt to lie down, stumble, or forelimb splay. Front-wheel carts can be used when support is only required for the forelimbs and no concurrent issues affect the spine or rear limbs. The towel/sling test could be reversed and placed around the ribcage to determine the appropriateness of a front-wheel cart.

Extra consideration should be given to an animal that seems appropriate for a rear wheel cart but has concurrent issues affecting the spine and/or forelimbs, such as arthritis, spondylosis or intervertebral disc disease (IVDD), joint anomalies, or a progressive condition, such as degenerative myelopathy. The rear wheel's position in relation to the rear limb and center of gravity can be manipulated in some designs to shift the center of gravity



forward or counterbalance the cart to differing degrees. This may allow a dog with rear paraparesis and elbow dysplasia to use a rear limb cart if the option to counterbalance is available. This option allows for more maneuverability and the ability to go on varied terrain. Additional joint supports, such as carpal wraps, can allow dogs to use a rear wheel cart longer.

Along the same lines, some rear-wheel carts may place too much weight on the forelimbs and over the scapulae, depending on the design. This is generally due to the fixed position of the rear wheel in relation to the hind limb. Take this into careful consideration when comparing companies. A young, highly energetic, or athletic dog may do better with wheels behind the rear for additional stability. In contrast, an older dog with multiple conditions may need a counterbalanced cart to aid the front legs.

Quad carts are very stable and support the entire body as needed. Depending on the style, they can be very maneuverable based on the animal's abilities and terrain. Front-wheel carts offer high maneuverability, though they are often wider for stability. Animals can sit in a front wheel cart. In a rear wheel cart, medium and small animals may be able to rest their front end in a downward



dog position, but they cannot sit or lie down. Animals in a quad cart can rest in supported standing and may have the option of a headrest if needed.

STYLE

Choosing the right cart for your patient comes down to knowing their needs and abilities, the same for your client, and selecting the cart with the features that meet all those needs. Things to consider for the client are how much lifting is required to get in/out of the wheels, what kind of fasteners are used vs. arthritis in hands/dexterity, additional harnesses required, the device's weight, portability, and aesthetics. The type of terrain and activity level of the animal may play a factor in the choice of wheel size and type and durability of the cart. If the client has a dog, kids, car seats, strollers, and a cart, potentially a design that can fold would be highly valuable. A client with a giant breed dog or even smaller dogs but decreased strength/dexterity will need options with minimal lifting. For the patient, ability level, age, energy and exercise requirements, favorite activities, and movement patterns must all be considered to ensure the device moves with the patient and helps to maximize their mobility.

An important factor for both rear wheel and quad carts is the ability to use the limbs, to what extent, and the animal's gait. A tall dog with degenerative myelopathy who can still walk fairly well often has a hypermetric or dysmetric gait, meaning their step length is long and/or irregular. A fixed, rigid saddle may impede this patient's mobility. In contrast, the same style saddle would provide excellent support to a dog with full paralysis and impaired core strength. Styles with more flexible rear support, such as padded leg rings or flexible neoprene saddles, will allow for more ability to shift weight laterally and use the core.

For quad carts, terrain, and activity level are important for the front wheels. Small animals, such as small dogs, cats, and rabbits, may be limited with available terrain due to the size constraints of wheels vs frame size. Larger wheels for other animals may provide increased stability and widen the types of terrain they can navigate. For example, a dog with cerebellar hypoplasia (CH) showing mild to moderate ataxia may do better with a cart design, allowing them more freedom of movement, such as a suspension system with softer saddles. Another dog with CH with severe ataxia may need a sturdy frame with large wheels and fixed support. The excessive lateral movement can translate through the frame and make it difficult for them to move forward if they have too much freedom of movement, which is true for rear wheel carts.



Custom vs off-the-shelf (OTC) options are available, with pros and cons for each in rear and quad cart designs. Front-wheel carts are only available from custom manufacturers. If the need for support is temporary, a highly adjustable OTC cart may be just the thing to help that patient regain their strength and mobility following surgery or injury. Carts can be potentially used to protect surgical procedures, especially in cases where bilateral operations occur or multifocal trauma. For example, consider a senior dog with post-op tibial plateau leveling osteotomy (TPLO) who also had significant elbow arthritis. A rear-wheel cart often allows controlled weight bearing under supervision in a more balanced manner than supporting the rear end with a sling or harness. There is less stress on the forelimbs, controlled use of the surgical limb, protected use of the contralateral hind limb, and reduced physical strain on the client. Carts could be rented from the surgical or rehab team for the recovery duration to ensure proper use, balanced fit, and enhanced recovery time for multiple conditions. Custom carts are excellent options for animals who will need longer term use. Off-the-shelf carts can often meet the needs of these animals also, as long as they are properly fit and balanced. Custom carts offer the ability to further counterbalance and meet specific design/anatomical needs such as splayed limbs, and so on.

Additional factors to consider are ease of converting from rear to/from full support, adding support to front wheel carts, return policy offered, and cost. If any modifications are needed to custom carts, what is the expense, turnaround time, and policies/ease regarding replacing parts? Some companies offer refurbished products, and some organizations are offering donated carts.

WHEN IS IT TIME FOR WHEELS?

Introducing wheels early benefits our patients with impaired or declining mobility. Consider our human patient population for a moment. If a person were experiencing difficulty walking due to pain from hip arthritis, limiting their daily function, we would introduce an assistive device. It should be no different for our animal patients. Consider the typical course of a dog whose hip dysplasia has become significant enough to limit walking. Medication provides limited relief, but walks have dwindled to going out to potty only. It gets more challenging to get up because the muscles weaken, joint inflammation and pain continues to

increase, and the downward spiral continues. If a rear wheel cart were introduced when the client noticed their dog was slowing down, ideally in conjunction with physical rehabilitation, the dog would be able to walk with support and reduced pain. Now we may observe an upward trend of improving strength, reduced pain, improved affect and quality of life, and even improved mobility without the wheels. It is never too late; however, the further an animal's mobility and strength deteriorate, the more work and potentially a more supportive cart will take to improve.

Common signs it may be time to consider wheels:

- Slowing down on walks, reluctant to walk
- Sinking down in the rear end
- Splaying limbs
- Falling when turning
- Limping
- Dragging or knuckling feet
- Joint issues - inflammation and/or laxity (Cushing's, IMPA)
- Weight-bearing restrictions post-op (short-term)
- Complicated orthopedic surgery (bilateral)
- Recovery from spinal surgery
- Paralysis
- Coordination disorders (cerebellar hypoplasia)

MYTH BUSTERS

Finally, let's turn around some of the biggest misconceptions in the public and veterinary worlds, which stop professionals from recommending wheels and clients from seeking them.

Myth: Wheels are for paralyzed animals only.

The stereotypical picture that comes to mind is probably a dachshund with wheels, presumably after a disc rupture from intervertebral disc disease. Multiple patient populations can benefit from wheels. Arthritic joints can be supported, amputees, immune-mediated polyarthritis and endocrine conditions affecting the joints, seniors with multiple issues, mild to moderate neurological conditions with ambulatory paresis and ataxia, congenital conditions, etc. Again, early intervention can help to improve or preserve function and strength, even in progressive conditions such as degenerative myelopathy.

Company	Support offered	Support style	Custom?	Adjustable?	Rear wheel position adjustable?	Other features
Walkin' Pets	Rear and quad carts	Padded leg rings	No	Yes: height, length, width	No	Wide range of harness/supports, rear folds
Eddie's Wheels	Rear, quad, and front-wheel carts	Fixed padded saddle rear, adjustable mesh front	Yes, fully custom	Limited	Counterbalanced and variable axle options, can convert any rear cart	Can customize the frame to unique needs
Doggon' Wheels	Rear and quad carts	Flexible neoprene-reinforced saddle	Yes, fully custom	Yes, height/length, width, no	Yes	Frame, design, and harnesses all customizable
K9 Carts	Rear, quad, front carts	Padded leg rings	Semi and fully custom	Yes	No	Lightweight

Myth: Wheels will make the animal dependent, lazy, and/or weaker.

Animals want to move, especially our dogs. Supporting them to be successful and stronger will encourage more movement. Wheeled devices will provide as much support as we allow, from full weight bearing to toe touch, and even with other assistive devices like dorsiflex assist straps/boots - many cases will gain strength. Function can often improve out of the wheels as the cycle of falling and inefficient walking is corrected.

Myth: They will never walk again.

Patients recovering from spinal surgery or injury need supported weight bearing to regain limb function. Sling support is often unevenly distributed. A cart can provide support with neutral spinal alignment and, combined with other assistive devices, allowing the animal to learn to walk again. Some may not walk again and will use the cart for supported ambulation with proper alignment. It is imperative that a cart be properly fit to ensure further injury is not caused, and the prescribed activity restrictions should still be followed post-op, ideally under the guidance of a certified rehabilitation professional. One can understand why surgeons don't recommend carts until after 6+ weeks. Physical therapists have the opportunity to educate our colleagues on the benefits of using carts post-op for spinal patients and other patient populations.

Myth: It's too much strain on the front legs/body.

A properly fit and selected cart will balance an animal's weight distribution to make things easier. There should not be excessive strain or pressure; those are signs of an ill-fitting cart or a need for more support. A rear-wheel cart can often assist the front limbs and relieve stress if used correctly.

Myth: It's the end of the road.

Circling back to early intervention interrupts the downward spiral, waiting until no more options benefit anyone. This is often a fear clients voice - if we are introducing wheels, it must be the end. Get ahead of their fears and bring this one up before they ask. Gently assure them that the goal of introducing a cart is to maximize mobility and increase quality of life, so they can continue (or return to) doing the things they love.

Case example:

Joie is a 16-year-old NM Terrier mix, 11 lbs. Joie suffered a right cranial cruciate ligament (CCL) tear in February 2024,



positive cranial drawer. This was successfully rehabbed with laser, manual therapy, therapeutic exercise, pulsed electromagnetic field therapy, and a neoprene sleeve for proprioception. Joie regained fair weight bearing within a couple of weeks and continued to use the sleeve for walks on the property. In early November 2024, Joie sustained a tear of the left CCL, positive cranial drawer, and was confirmed with evaluation by a veterinary surgeon. It was agreed to continue with conservative management due to surgical risks associated with age and other health conditions. A neoprene sleeve was added for the left stifle, and a rear wheel cart was fitted. Joie's lameness improved from 4/4 non-weight bearing to 2/4 with the sleeve and 1/4 with just the wheels. A cart that could move the wheels forward was chosen, given Joie's concurrent elbow arthritis. He uses the wheels for short walks with minimal lameness and the sleeve during the day in the house and even stands on the left hind in his wheels to relieve himself in the yard.

Wheeled assistive devices can provide a lot of benefits to our variety of patient populations in animal physical therapy. Hopefully, this will translate into research to support what we see daily in the clinic and in the lives of our patients who use carts to maximize their mobility and quality of life and provide evidence to reverse myths, one by one.

Jenny Moe is an animal physical therapist living and working in San Francisco, CA. She is the Vice President of the Animal Physical Therapy SIG and owner of Moe Love Myofascial Release and Doggon' Wheels (since 2021). Jenny's love for bracing and assistive devices came naturally from the world of pediatrics to animals. When she isn't making devices for animals, she is usually at the beach with her cattle dogs, training for a triathlon, or cuddling up with the cats.

All photos property of Jenny Moe

Index to Advertisers

Barral Institute	35
Ph: 866/522-7725	
www.Barralinstitute.com	
MEDICORDZ	49
Ph: 800/866-6621	
www.medicordz.com	
Motivations, Inc.	43
Ph: 800/791-0262	
www.motivationsceu.com	